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The monthly magazine of the

North East Victoria Amateur Radio Club

<http://nevarc.org.au/>



An Affiliated club of Wireless Institute of Australia

An Affiliated club of Radio Amateur Society of Australia Inc.



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October

2020

No October Club Meeting Due to COVID-19 rules on gatherings

Socialize on the airwaves instead

IF RADIOS WERE HAMBURGERS:



ICOM



KENWOOD



YAESU



FLEX



ELECRAFT



BAOFENG

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VK3VS HARMONICS

Matt & Amy Bilston and family proudly announce the arrival of two new potential F calls, Alexander & Zoe (Boy & Girl) on Monday 28th September.

With Matt, they won't be F calls for long!

New H.266 codec uses half the data to stream 4K video

Fraunhofer, the German company that helped develop the H.264, H.265 and MP3 encoding formats, has unveiled a new video encoding standard that could severely reduce streaming bottlenecks. Called H.266/Versatile Video Coding (VVC), it's specifically designed for 4K and 8K streaming and reduces data requirements by around 50 percent compared to H.265 HEVC (high-efficiency video coding). At the same time, the improved compression won't compromise visual quality.

The company developed the codec in collaboration with partners including Apple, Ericsson, Intel, Huawei, Microsoft, Qualcomm and Sony. It will be licensed by the Media Coding Industry Forum (MC-IF), a group with 34 major member companies. The aim there is to avoid the kind of licensing squabbles that plagued the H.264 codec a decade ago.

Because of the quantum leap in coding efficiency offered by H.266/VVC, the use of video will increase further worldwide. Moreover, the increased versatility of H.266/VVC makes its use more attractive for a broader range of applications related to the transmission and storage of video.

Fraunhofer said that if a 90-minute, H.265/HEVC-encoded movie is about 10GB, it would only be 5GB for the same quality when encoded with the new codec. "Because H.266/VVC was developed with ultra-high-resolution video content in mind, the new standard is particularly beneficial when streaming 4K or 8K videos on a flat screen TV," Fraunhofer said. At the same time, it will support all formats from 480p on up.

Once implemented, VVC could allow a stark reduction in traffic from services like Amazon Prime Video, Hulu and Netflix. Video streaming takes the lion's share of the world's internet bandwidth, something that's become starkly apparent in the COVID-19 era. Because of the jump in traffic during pandemic lockdowns, services like Netflix and YouTube agreed to reduce default streaming rates to take the strain off web infrastructure.

At the same time, streaming services could use VCC to offer higher 4K HDR quality without increasing bandwidth, given the more efficient compression. The new system will also be indispensable once 8K video — with quadruple the bandwidth requirements of 4K — enters the mainstream.

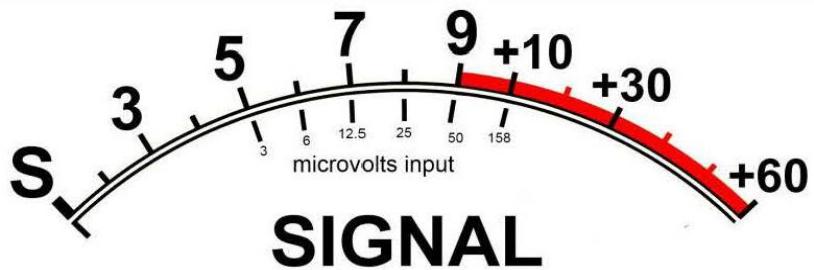
There's no software standard yet for VCC encoding and decoding, though Fraunhofer said it will deliver one near end of the year. The company added that "the new chips required for the use of H.266/VVC, such as those in mobile devices, are currently being designed." In other words, it might still be awhile before you see the tech working on your TV, smartphone or computer.

-Internet

Understanding Your 'S Meter'

Dave Wilson TTS Systems

Most receivers and transceivers boast some form of S (Signal Units) Meter; the indicator type can be a moving coil meter, a bar graph style indicator using LED's or an LCD or even a graphical image on a computer display. In some cases the meter is multi-function and used to measure other parameters like RF power ALC and VSWR. What does this S Meter tell us?



An S Meter measures the signal level at the antenna input terminals.

Firstly let us look at the scale. The scale is a logarithmic function and scaled as follows -- S units start at S0 and range to S9, above the S9 point the units are in decibels above S9 and generally in 20 dB steps up to 60dB (some meters read up to 80dB above S9).

S Units	Volts	Power (dBm)
S9+60	50mV	-13
S9+40	5mV	-33
S9+20	500uV	-53
S9+6	100uV	-67
S9	50uV	-73
S8	25uV	-79
S7	12.5uV	-85
S6	6.25uV	-91
S5	3.125uV	-97
S4	1.56uV	-103
S3	0.78uV	-109
S2	0.39uV	-115
S1	0.195uV	-121

A correctly calibrated S Meter reading of S9 is equivalent to a signal of 50uV (or -73dBm) at the antenna-input terminals. A reading of S1 is equivalent to a signal of 0.195uV (or -121dBm) and a reading of 20dB over S9 is equivalent to 500uV (or -53dBm).

Each S unit represents a signal level variation of 6dB or a power difference of four times. For example on an antenna A you are reading a signal at S5 and you change to antenna B the signal reads S6 the improvement is 6dB or 3.125uV. This means antenna B has a gain of 6dB over antenna A.

Correct interpretation of your S Meter can be a valuable tool for station operation. You can use it for antenna comparison, antenna noise measurements, receiver adjustment and of course the passing of signal reports.

Worth noting -- if you are operating your transmitter at a power of 100 watts and you wish to increase the receiving station's signal by 1 S point you will need to increase your transmit power to 400 watts ($10 \cdot \log(\frac{400}{100}) = 6\text{dB}$). Think about it!

For reference 0dBm = 1mW or 0.225 volts into a 50 ohm load.

Article from <https://www.ttssystems.com.au/> used with permission © TTS Systems

Stop Squealing – How to not embarrass yourself on live television

Operating ham radio is fun, but sometimes lots of things happen at once. This is true of Amateur Television. Too often I will be watching someone in a round robin session on the television repeater. As soon as it's my turn to speak, you power up your transmitter and then two seconds later a cyclic howl of feedback appears – you have forgotten to turn the volume down on the TV (again) and the VK3RTV repeater has gone into audio feedback. This happens not just to me but many operating on ATV. It was time to engineer a solution.

The answer was quite simple; don't know why I did not do it earlier.

On transmit I have power going to LED's so I know I am on air. This power was tapped to feed a relay. When the relay is not active the normally closed contacts bypass series shunt resistor, that would otherwise lower the speaker volume when not transmitting, TV sound is normal.

A pad 10Ω resistor is in the normally open side so it's switch out of the circuit.

Once you are transmitting, the relay picks up; bringing the series shunt resistor in circuit and the 10Ω pad attenuation resistor is now across the circuit, so the TV speakers are lowered in sound level.

All this is done automatically, no need to remember to act.

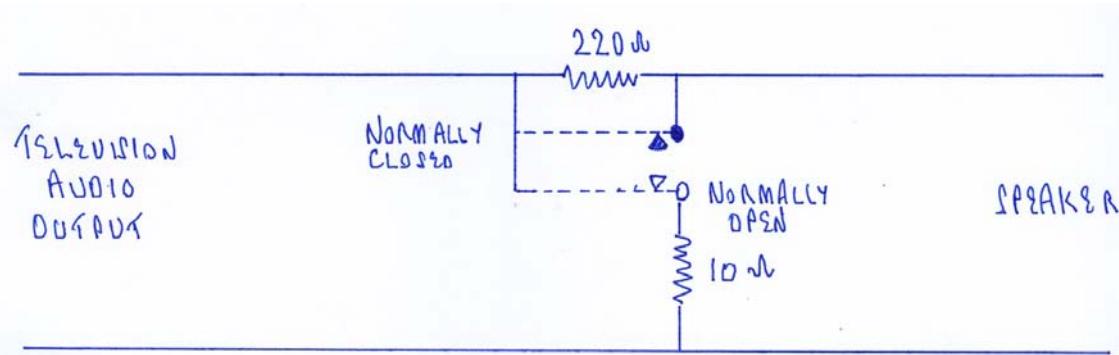
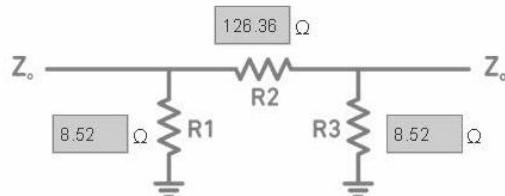
Where the extension speaker is located make a big difference, the further from the camera microphone is best. I have found using a bigger speaker with more bass helps a lot.

The TV also has sound equalization, but that makes everything sound too washed out so I don't use that option.

Many online calculators for attenuation, the nearest resistor values I found here, the speaker itself forms the R3.

Z ₀ Ohms Ω	8
Attenuation dB	30
Outputs	

PI ATTENUATOR:



Some other resistor values I tried, as I found a lot of 10Ω and 200Ω in the junk box, were;

In Shunt Load	Shunt	Series Shunt	(made up of 200Ω resistors parallel)	dB Attenuation	VSWR
10Ω	6Ω	200Ω	1	34.63	1.191
10Ω	6Ω	100Ω	2	28.92	1.139
10Ω	6Ω	66.6Ω	3	25.68	1.193
10Ω	6Ω	50Ω	4	23.48	1.052

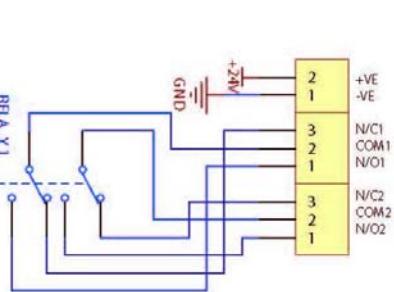
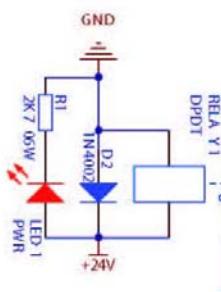
I had an old 5.2 kg sub woofer 6 Ω speaker that the electronics finally died after years of hard partying music. I kept the box, it is really heavy thick wood and now it has been used for this project, this saves some expense. As the cabinet is designed for bass, everything now has the valve radio sound, like the old big cabinet radios of yester years.

An LED indicates when the speaker is operating in attenuated mode.

Now I don't need to remember to turn the TV volume down when I go to transmit on VK3RTV.

A relay board was used, saves soldering and quite cheap.

As the TV is stereo, each side has its own relay contacts, so my attenuation circuit was duplicated.



The modified auto muting sub woofer box



MICROPHONE IMPROVEMENTS

While I was dealing with television audio, I decided time to fix the microphone placement.

The dynamic microphone does not give any audio directly into the SR-Systems board, it requires amplification.

A microphone preamp was bought and it boosted it somewhat, but you had to be right over the microphone for decent audio.

The preamp has two microphone channels and the idea of feeding one side straight into the other for a boost was worth a try. Each side has a quoted gain of 50dB, so that's 50dB feeding into another 50dB.

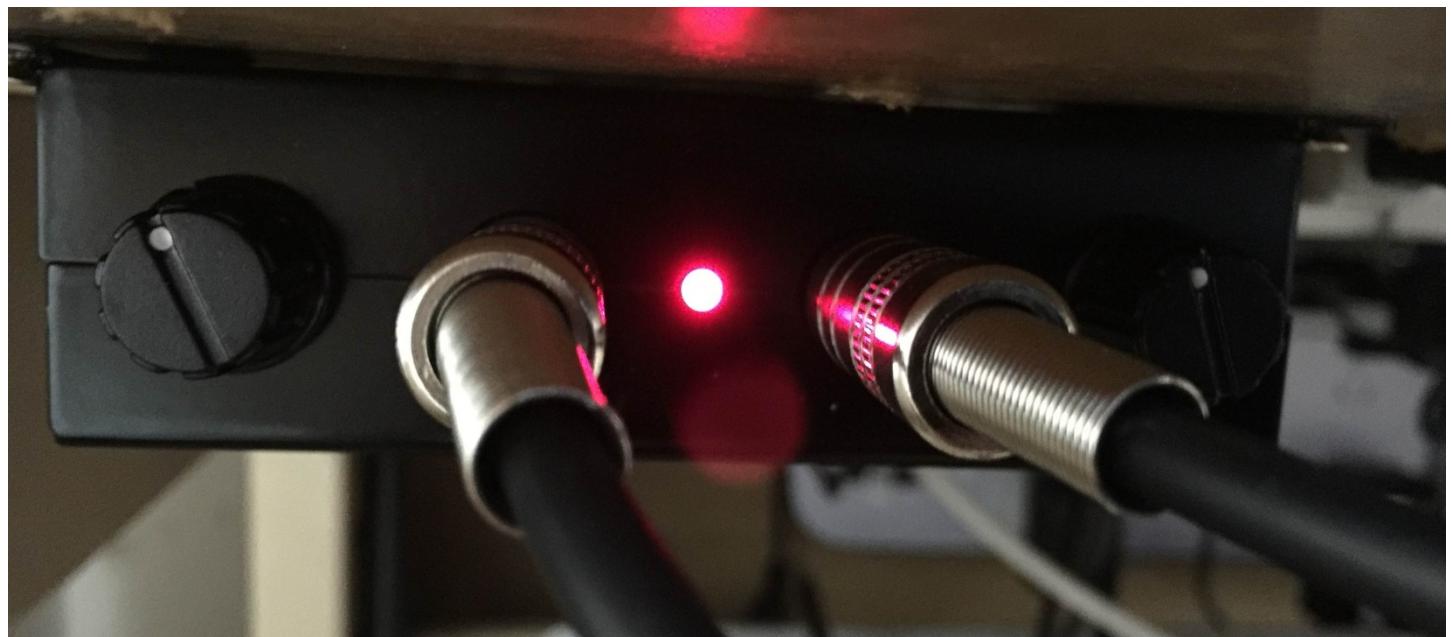
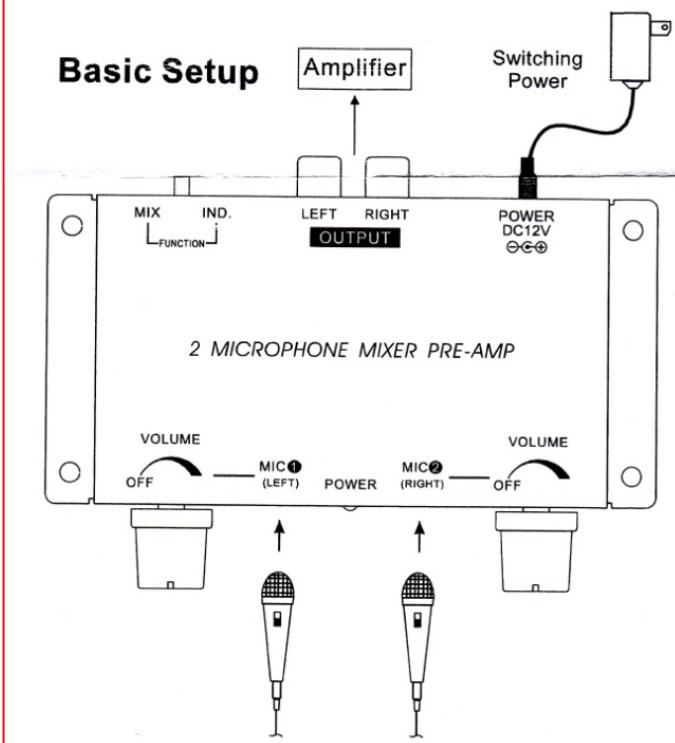
Well mate, it certainly boosted the gain, you can walk to the other side of the room and still be heard no need to 'hover' over the microphone and not any mains hum or buzz at all.

As each side has its own gain level control, the potentiometers can be adjusted for the microphone sensitivity required.

Now TV sound attenuation is really necessary, but we have that happing automatically now, so no problem.

SPECIFICATIONS:

1. Input Microphone Type: 6.35mm Dynamic Microphone
2. Input Impedance: 600 Ohms
3. Mic Pre-Amplifier Gain: 50dB
4. Signal to Noise Ratio : 80 dB
5. Power Source: 12 VDC

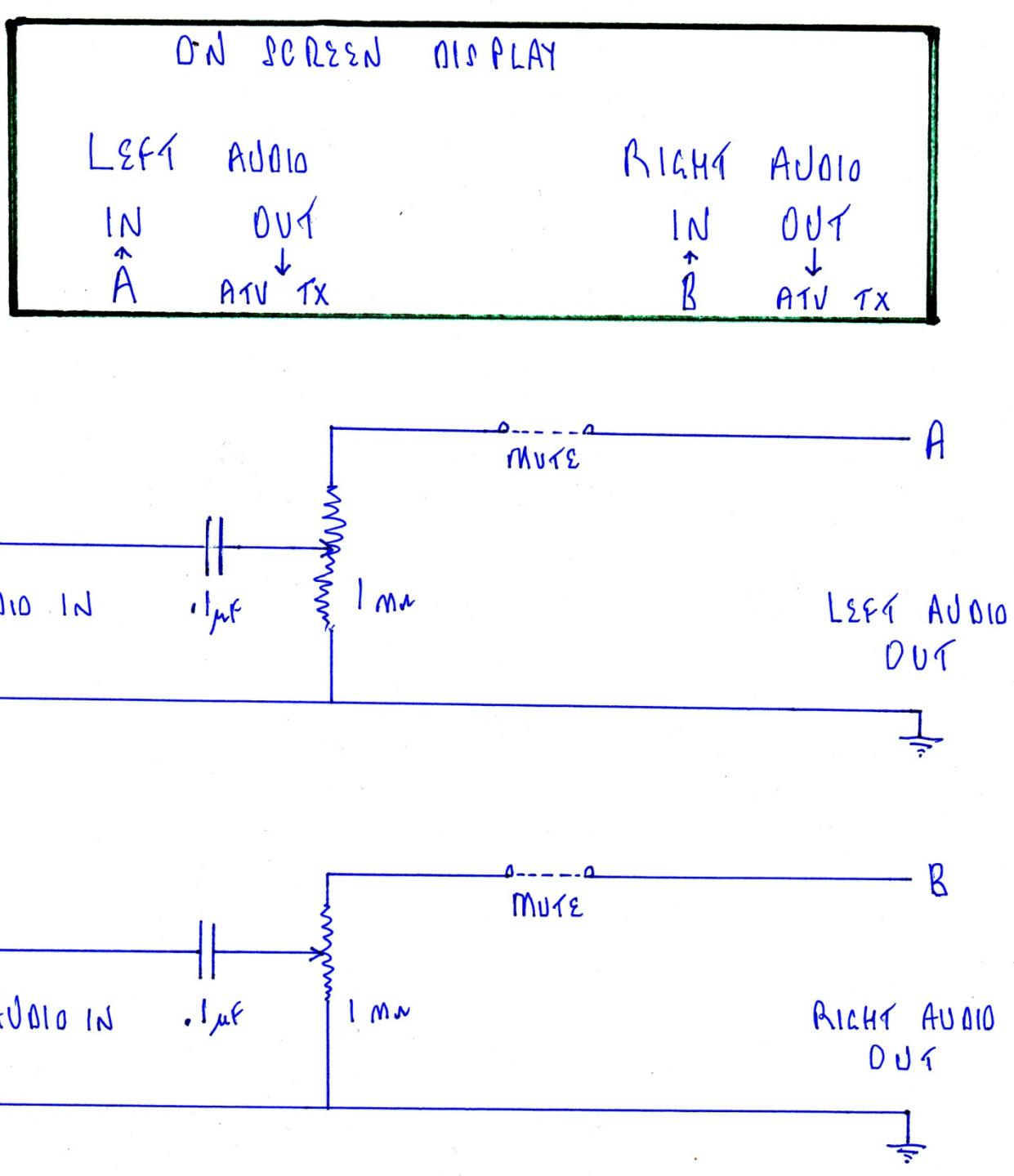


The two channel microphone mixer mounted underneath the table, one side feeds into the other.

MASTER TALK OVER CIRCUIT

Being able to narrate over video from the PC or other sources when not otherwise on main camera is handy. As the potentiometer will vary the resistance on the wiper side, I used a 0.1uF capacitor to isolate the load.

A dual throw switch used to mute the talk over; the potentiometer can remain at the desired level for next use. I built this into the On Screen Display Unit; my ATV Transmitter has enough stuff on the front panel.



Depending on the other input load that it is talking over, the audio level varies a little, but manageable. The master volume on the audio preamp can deal with any adjustments; I usually don't bother, close enough. That's all the Amateur Radio Television extras I need... famous last words.

~Mick VK3CH

Critical cross-border interstate communication missing at height of Black Summer bushfires

On the Victorian side of the river, Walwa local Robert Newnham and his fellow volunteer firefighters still have vivid memories of watching the fire approach from New South Wales that day.

"We could see the fire, we could see that there was people there, we didn't know what they were doing or what was coming our way really, we were just guessing," he said.

"We needed to know a lot more so that we could prepare more for what was coming our way."

Despite the NSW fire crew being within about a kilometre, Mr Newnham said they had no way of communicating with them.

That's because different state fire and emergency services operate on different radio networks and in some instances different agencies within states also operate on different networks.

"That's been an issue for many, many years now, that we've both got radios in our trucks but we can't talk to each other," Mr Newnham said.

"We can get angry but the main thing is to get something done about it."

On the NSW side of the border, Community Safety Officer for the Jingellic Rural Fire Service (RFS), Mary Hoodless, said it had been a problem for the 35 years she had been in the border region.

"It's an issue on every occasion and it was exacerbated on this occasion," she said.

"For me, it's like, where's the common platform? You know, the technology's there. Why haven't we got it?"

Community Safety Officer for the Jingellic RFS Mary Hoodless.*(ABC News: Jess Davis)*

This week Ms Hoodless will tell the bushfire royal commission how difficult the natural disaster was for border communities.

"There's a lot of border crossings with populations that have been highly impacted by that lack of communication," she said.

"We can only hope coming out of the royal commission, that we do see some improvement."

Former NSW Fire and Rescue Commissioner Greg Mullins said he takes some responsibility.

"People like me need to take a bit of blame for this because we didn't do a lot about it in years gone by, but it's now time to get that Australia-wide radio net," he said.

"Technically it can be done, it's just having the will to do it, having the money to do it."

Mr Mullins said in the past it was not as critical, because fires and firefighters rarely crossed state borders.

But with longer and fiercer bushfire seasons predicted, cross-border cooperation will be more crucial than ever.

"What's becoming very clear is that if you have a raging bushfire with fire-generated storms, winds coming in all directions, you need to be able to speak at a tactical level," Mr Mullins said.

"Firefighting units need to be able to speak to each other so they know what's coming at them."

It is not just an issue for border communities, with fire crews increasingly travelling interstate to assist on big fires.

"We had firefighters from every state and territory, from the US, New Zealand, even Papua New Guinea," Mr Mullins said.

"For example, the Melbourne Metropolitan Fire Brigade units in regional NSW not being able to speak to the local units on their radio channels, Country Fire Authority from Victoria [had] the same issue."

In a statement, the NSW RFS said liaison officers were deployed to help with cross-border communications.

"These liaison officers were in place, on both sides of the border, during this period.

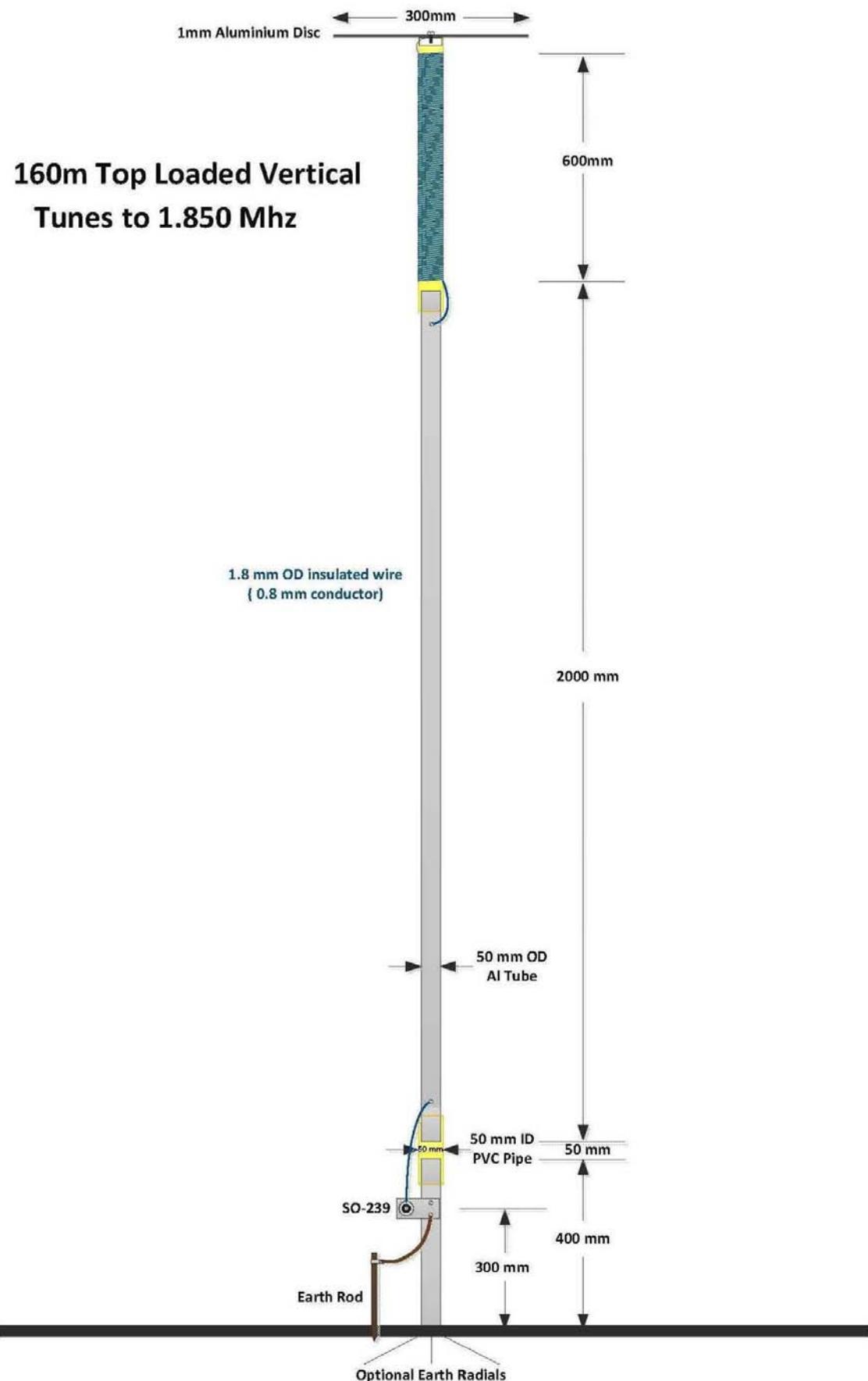
"There can be challenges when deploying vehicles interstate to enable radio communications between all vehicles.

"Significant work may be required to permanently resolve these issues ranging from the installation of compatible radios in trucks or the reprogramming of existing radio equipment."

~Internet

Simple 160 Meter Top Loaded Vertical Antenna

Here is an easy way to get onto 160 meters. Some of the Melbourne AM Coffee Club Net are trying these out. Signals on 160 meters look at <http://crossbandradio.com/> or SDR at <http://sdr-amradioantennas.com:8074/>



Australia's undersea telegraph cables listed under NT Heritage Act, 150 years on



Parts of the undersea cables can be seen during very low tides in Darwin

It is one of Australia's most significant engineering achievements, and now almost 150 years after they were installed, parts of the undersea telegraph cables that linked Australia to the rest of the world, have been heritage

The cables that were laid in the Territory in 1871 revolutionised trade and communication in the colony, and transformed the fledgling northern settlement of Palmerston, now known as Darwin.

"This changed communication in the 1870s in the same way that the internet changed communication in the late 20th century," director of the NT Government's Heritage Branch, Michael Wells said. "Darwin at that time was in effect a hub for an incredible communications network that linked the cities in the south of Australia to the rest of the world. Private companies and governments and media organisations went from having to take weeks to send messages and to receive messages, to almost being able to do it in real time,"



The landing of the cable at Port Darwin in 1871
(Supplied: State Library of Victoria)

The heritage listing will protect the cables at the site in the intertidal zone where they come ashore in Darwin. The listing is welcome news to history enthusiast Mike Owen, a co-founder of the NT's Past Masters group — an informal association of heritage professionals who got involved with the project as a labour of love. As a member of the group he has spent hours mapping the partially buried cables with a metal detector at Darwin's Lameroo Beach.

"When you think, from here to London by cable, it's just fantastic isn't it?" Mr Owen said.

"It linked very important parts of the world for shipping, for trade and for weather."

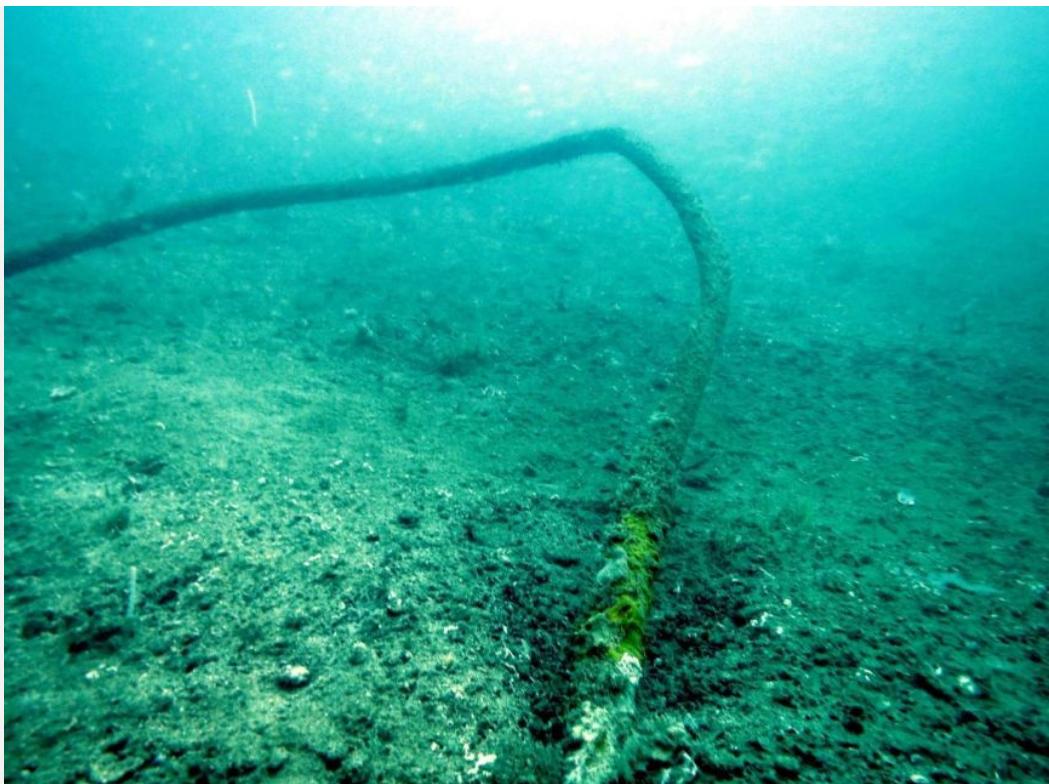
Getting the cable to link to Darwin was complex and expensive.

The Australian connection needed both a northern port to link to the world, and an overland telegraph line to carry messages to southern states.

The Darwin Subsea Telegraph Cables Heritage Assessment Report that was prepared by the Territory Government's Heritage Branch outlined fierce competition between the states to own the route.

South Australia, which then administered the Northern Territory, lobbied strongly for the British Australian Telegraph Company, a subsidiary of the Eastern Extension, Australasia and China Telegraph Company, to bring the undersea cable through Darwin to Adelaide via an overland telegraph wire.

To sweeten the deal, South Australia agreed to fund and construct the overland wire.



A kink in the cable where it is suspected to have been snagged by an anchor

(Supplied: NT Heritage Branch)

Mr Owen said the works took just under two years to complete but the total costs blew out to almost double the original budget of 128,000 pounds.

"It could have bankrupted the whole state, in fact it nearly did," he said

"The British Prime Minister stood up in the house and said it was the most extraordinary thing and the greatest achievement of any single colony without a single jot of outside help."

For the decades that followed, Morse coded messages sent from Adelaide to London travelled through 14 different cable stations along a telegraph network that ran for more than 20,000 kilometres.

The overland telegraph lines were functional until the 1960s but as World War II moved closer to the Territory's borders in 1942, the international connection was lost.

"They were afraid, with the Japanese coming down through Java and Timor, that they would use it to plug into the rest of the world's communication. So, it was cut then, which was really a shame," Mr Owen said.



The cables connected Australia to the rest of the world for the first time
(ABC News: Mike Donnelly)

Mr Owen said the telegraph network was a success story of its time that needed preserving.

"Stories like this, it gets people involved and they become part of the story and they talk to locals about it and these things build up over time," he said. "These things have value because locals value them."

Marine Archaeologist Dr Silvano Jung said the telegraph cable was a national revolution that started in Darwin.

"It linked Australia with the rest of the world for the first time, it really made Australia a lot less isolated," he said. "This is part of the story that connects several sites across the Territory, not just in Darwin Harbour."

"So, we've got a wonderful piece of the puzzle that's clicked in here, we've still got some more work to do."

Dr Jung hopes the heritage listing will drive more funding for surveys of other important sites connected to the telegraph cable ahead of the 150th anniversary.

~Internet

Important notice for newsletter article submissions

The newsletter is only as good as the material provided by the members.

So if you're out and about, bought a new piece of kit, or brewing something on the bench, write up a few words take a picture and send it in.

Equally, if you see something weird, interesting or funny, send it through.

Please don't worry about the format or the layout.

An email or text document is fine.

The editor will sort it out so that it fits in with the rest of the newsletter.

The EMDRC VK3REC Repeater has been updated; a 91.5Hz tone is now required to key it up



SLEEPING WITH JACK

The guys were on a DX tour.

No one wanted to room with Jack, because he snored so badly.

They decided it wasn't fair to make one of them stay with him the whole time, so they voted to take turns.

The first guy slept with Jack and comes to breakfast the next morning with his hair a mess and his eyes all bloodshot.

They said, "Man, what happened to you? He said, "Jack snored so loudly, I just sat up and watched him all night."

The next night it was a different guy's turn. In the morning, same thing, hair all standing up, eyes all bloodshot. They said, "Man, what happened to you? You look awful! He said, 'Man, that Jack shakes the roof with his snoring. I watched him all night."

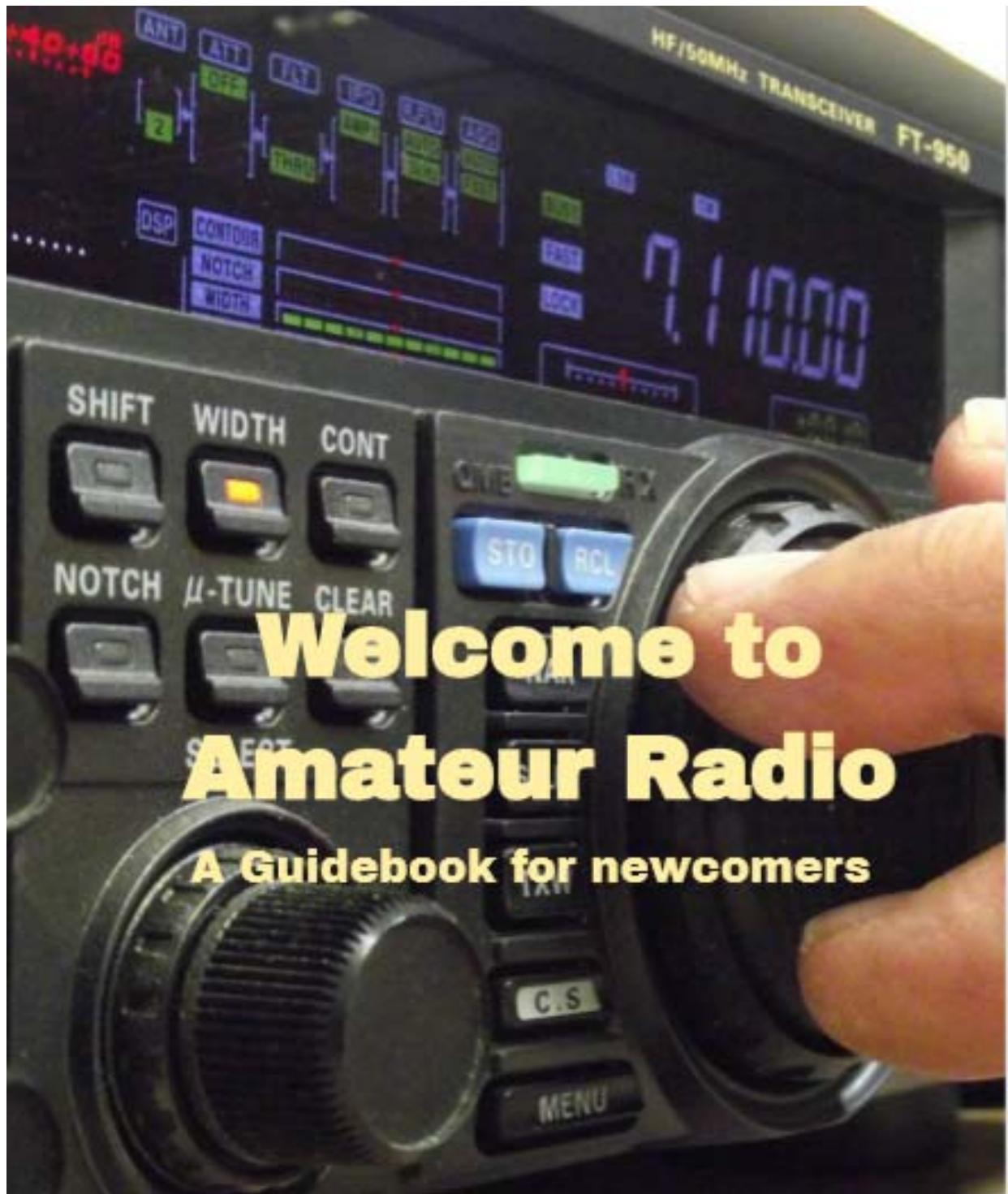
The third night was Bill's turn; he was an older DX hound.

The next morning he came to breakfast bright-eyed and bushy-tailed. "Good morning!" he said.

They couldn't believe it. They said, "Man, what happened?"

He said, "Well, we got ready for bed. I went and tucked Jack into bed, patted him on the arse, and kissed him good night on the lips. Jack sat up and watched me all night."

With age comes wisdom.



The RASA Welcome to Amateur Radio Guidebook provides an introduction to our hobby for newly licensed Foundation class amateurs. The book is published digitally.

It contains many hotlinks to external websites with useful information. It is available as an Acrobat PDF file suitable for reading on a PC or tablet. It can be printed if required.

<https://vkradioamateurs.org/welcome-to-ar-guidebook-for-newcomers/#>



**Safety
Harness of the
year**

I gave away all my old
batteries today...
free of charge!

A vicar, a doctor and an engineer

A vicar, doctor and engineer were playing a round of golf. They got to the third tee and were delayed by people still playing the hole.

The engineer lost his patience, "What's going on? We've been here at least 20 minutes!"

The doctor nodded in agreement.

The vicar saw the green keeper walking by and shouted to him, "How come that group ahead of us are so slow?"

The green keeper replied, "Oh, they're all blind firemen. They all lost their sight pulling school children out of a burning building, so they can play anytime for free."

Everyone was silent for a few seconds.

The vicar finally said, "Oh dear. I'll be sure to pray for them. Well done on such charitable work good fellow."

The doctor added, "Yes, well done to you. I'll make sure they get the best treatment at the eye unit in the hospital too."

The engineer, arms folded, tapping his feet said, "Ok, but if they're blind then why can't they play at night?"

A man is flying in a hot air balloon and realizes he is lost.

He reduces his height and spots a woman down below.

Lowering the balloon further he shouts, "Excuse me, can you tell me where I am?"

"Yes, you're in a hot air balloon, hovering 50 feet above this field" says the woman.

"You must be an engineer," says the balloonist.

"I am," replies the woman. "How did you know?"

"Well," says the balloonist, "everything you have told me is technically correct, but it's of no use to anyone."

"You must be in management," says the woman.

"I am," replies the balloonist, "but how did you know?"

"Well," she says, "you don't know where you are, or where you're going, but you expect me to be able to help."

You're in the same position you were before we met, but somehow now it's my fault."

Hum this to the Beatles Come Together...

Here come old corona
He come killing slowly
He got scary illness
He one global crisis
He got air problem
He can't breathe
Got to be a pandemic
He just do what he please

He wear no facemask
He got toilet paper
He got sanitizer
He sneeze virus droplets
He say I got you
You got me

One thing I can say there's just one way to be free

Don't come together
Right now
Quarantine

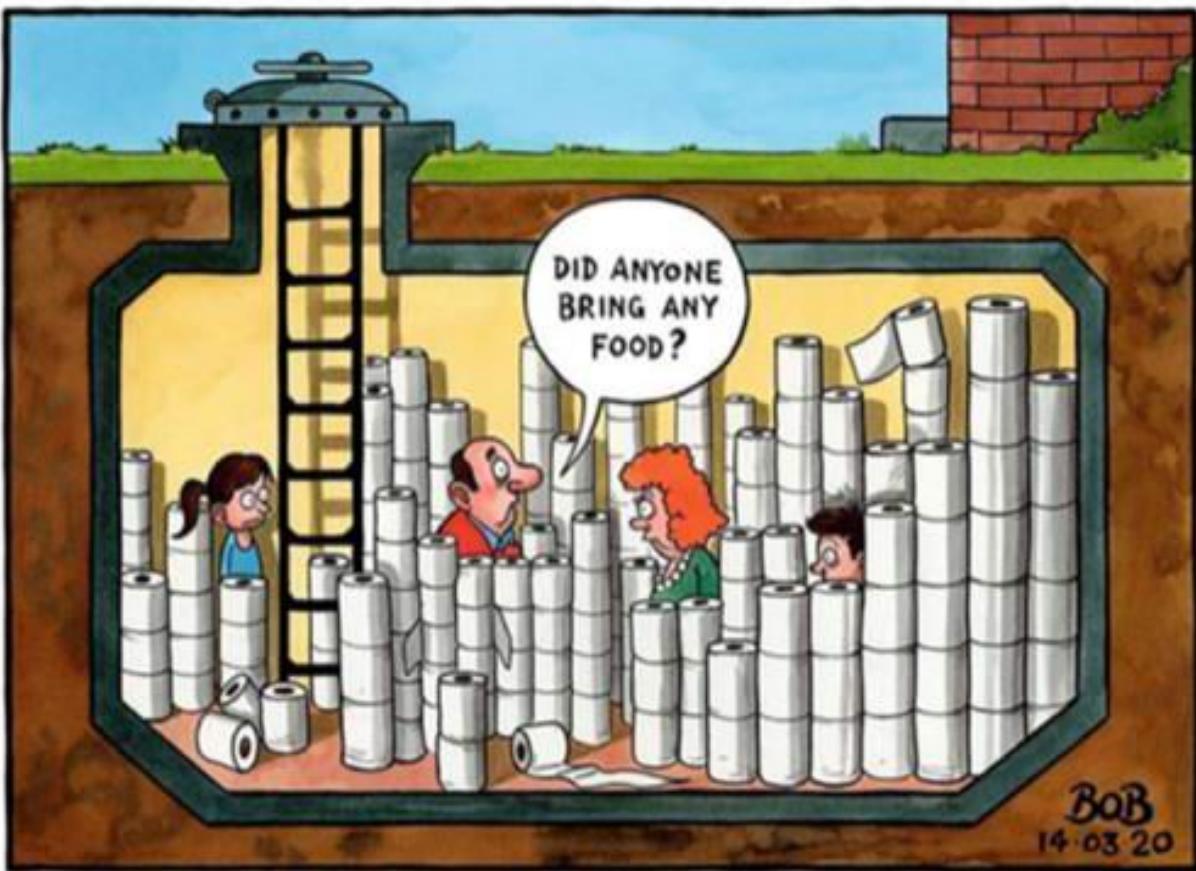
It reproduction
He got virus quickly
He got quarantine bored
He one virus spreader
He got high fever and he sneeze
Keep him isolated
So you can't catch his disease

Don't come together
Right now
Quarantine

He T.P. hoarder
He got early warning
He got infected water
He buy water filter
He say virus on a killing spree
Got to be silent killer
'Cause he's so hard to see

Don't come together
Right now
Quarantine

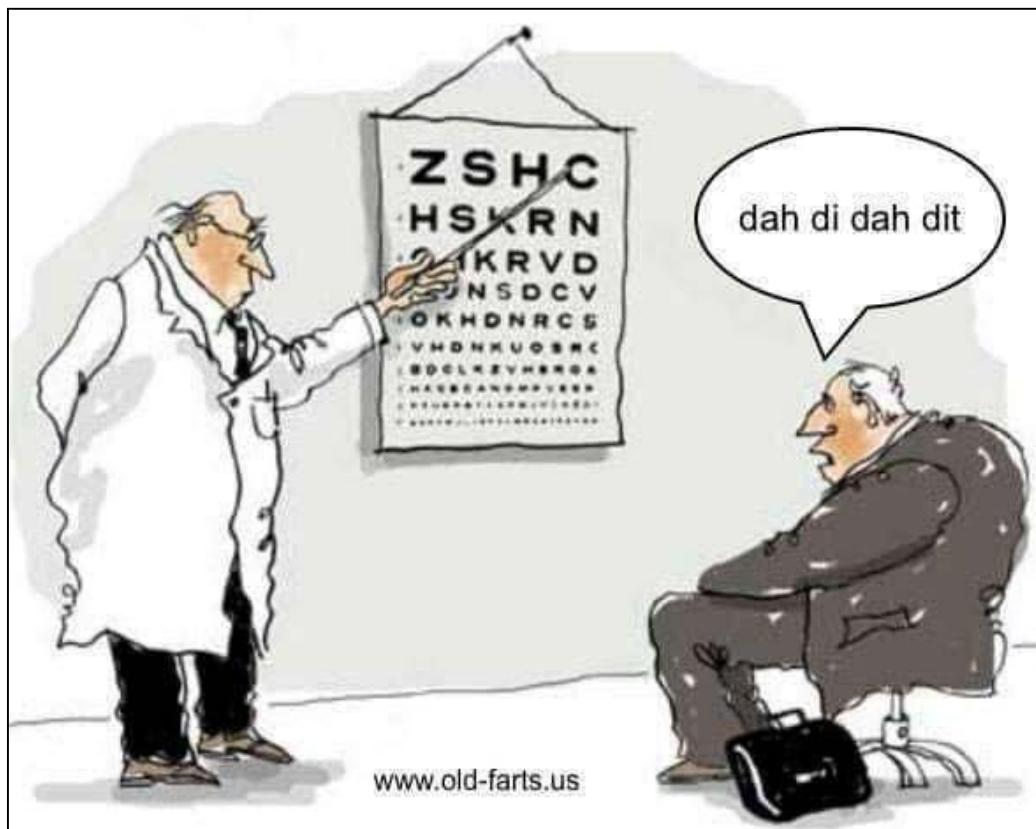
Don't come together, no
Don't come together, no
Don't come together, no
Don't come together, no
Don't come together, no





The Cat In The Hat On Aging

I cannot see
I cannot pee
I cannot chew
I cannot screw
Oh, my God, what can I do?
My memory shrinks
My hearing stinks
No sense of smell
I look like hell
My mood is bad -- can you tell?
My body's drooping
Have trouble pooping
The Golden Years have come at last
The Golden Years can kiss my ass



A nun was out in front of an Irish pub preaching to the passing crowd about the sins of alcohol.
A man entering the pub stopped her and asked her if she has ever had a drink.
"Good heavens, I wouldn't let that vile liquor anywhere near these lips."
"Tell you what," the man says, "I'll buy you a drink and if you don't love it, I will quit drinking forever."
"Well, I suppose if it were to save you from the clutches of the Devil, I could tolerate it just this once,"
agreed the nun, "but put it in this coffee mug so I may hide my shame."
The man walks in and orders two double whiskeys, asking for one to be poured into the mug.
The bartender sighs and says "That damn nun's out there again, isn't she?"

It was raining hard and a big puddle had formed in front of an Irish pub.
An old man stood beside the puddle holding a stick with a string on the end and jiggled it up and down in the water. A curious gentleman asked what he was doing.
'Fishing,' replied the old man.
'Poor old fool' thought the gentleman, so he invited the old man to have a drink in the pub.
Feeling he should start some conversation while they were sipping their whisky, the gentleman asked, 'and how many have you caught?'
'You're the eighth.'

In breaking news, Trump's personal library has burned down.
The fire consumed both books and in a tragic twist he hadn't even finished colouring the second one.

In Britain, when you turn 100, you get a letter from the Queen.
And when you turn 16, you get a text from Prince Andrew.

At birth, success is being alive.
At age 3, success is not pooping your pants.
At age 10, success is having friends.
At age 16, success is having a driver's license.
At age 20, success is having sex.
At age 30, success is having money...

At age 40, success is having money.

At age 55, success is having sex.

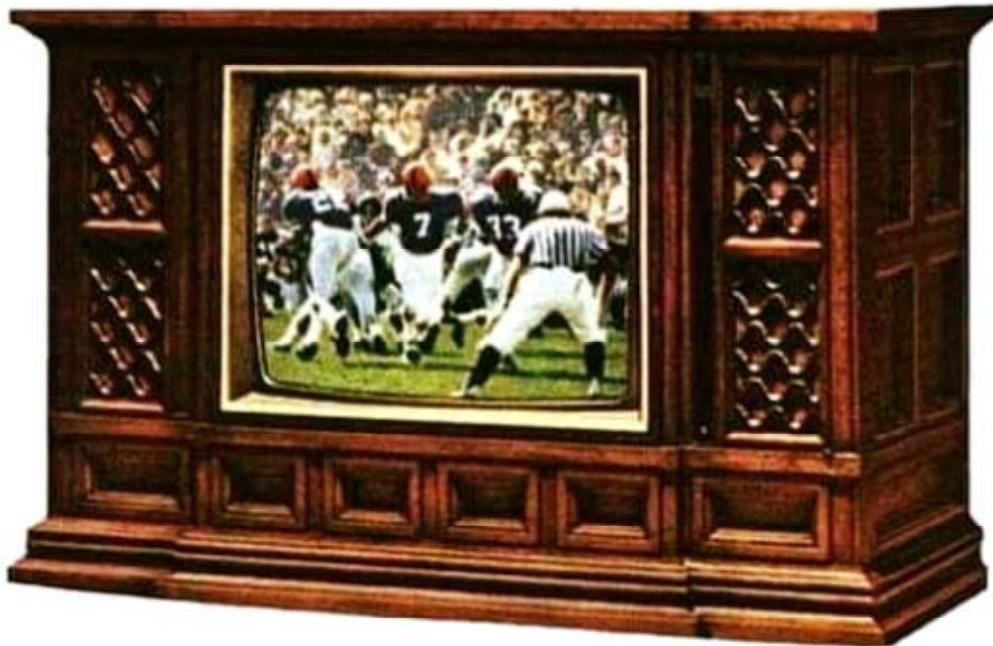
At age 70, success is having a driver's license.

At age 75, success is having friends.

At age 80, success is not pooping your pants.

At age 100, success is being alive.

I remember when HDTV stood for
Heavy Damn Television.



I've always been told that I have a face for radio
And a singing voice for silent movies.

Which virus killed the radio star?
Covideo

Yesterday I saw an ad that said
"radio for sale, \$1, volume stuck on full"
I thought, "I can't turn that down"

I used to tell a joke about radios
But its reception was always poor

COVID -19 DRAMAS



Having a hard time with restrictions with COVID-19?

Imagine you were born in 1900.

On your 14th birthday, World War I starts, and ends on your 18th birthday. 22 million people perish in that war.

Later in the year, a Spanish Flu epidemic hits the planet and runs until your 20th birthday. 50 million people die from it in those two years. Yes, 50 million.

On your 29th birthday, the Great Depression begins. Unemployment hits 25%, the World GDP drops 27%.

That runs until you are 33. The country nearly collapses along with the world economy.

When you turn 39, World War II starts. You aren't even over the hill yet.
And don't try to catch your breath.

On your 41st birthday, the United States is fully pulled into WWII. Between your 39th and 45th birthday, 75 million people perish in the war.

At 50, the Korean War starts. 5 million perish.

At 55 the Vietnam War begins and doesn't end for 20 years. 4 million people perish in that conflict.

On your 62nd birthday you have the Cuban Missile Crisis, a tipping point in the Cold War. Life on our planet, as we know it, should have ended. Great leaders prevented that from happening.

When you turn 75, the Vietnam War finally ends.

Think of everyone on the planet born in 1900.

How do you survive all of that?

When you were a kid in 1985 and didn't think your 85 year old grandparent understood how hard school was. And how mean that kid in your class was.

Yet they survived through everything listed above..

Perspective is an amazing art, refined as time goes on, and enlightening like you wouldn't believe. Let's try and keep things in perspective.

Your parents and/or grandparents were called to endure all of the above.

You are being called to stay home and sit on your couch.

COVID-19 ~ ACTUAL FACTS YOU SHOULD KNOW

This Covid-19 virus is not a living organism. It is a protein molecule (RNA or DNA) covered by a protective layer of lipid (fat), which, when absorbed by the cells of the ocular (eyes), nasal (nose) or buccal mucosa (mouth), changes their genetic code (mutates) and converts into aggressor and multiplier cells.

Since the virus is not a living organism, but is a protein molecule, it cannot be killed. It has to decay on its own. **The disintegration time depends on the temperature, humidity and type of material where it lies.**

The covid-19 virus is very fragile; the only thing that protects it is a thin outer layer of fat and that is the reason why soap or detergent is the best weapon. The foam CUTS THE FAT (that is why you have to scrub for 20 seconds or more, to create lots of foam). By dissolving the fat layer, the protein molecule disperses and breaks down.

HEAT melts fat; this is why it is necessary to use water above 77 degrees for hand washing, laundry and cleaning surfaces. In addition, hot water makes more foam, making it more effective.

Alcohol or any mixture with alcohol over 65% DISSOLVES ALL FAT, especially the external lipid layer of the virus.

Any solution with 1 part bleach and 5 parts water directly dissolves the protein, breaking it down from the inside.

Oxygenated water increases the effectiveness of soap, alcohol and chlorine, because peroxide dissolves the virus protein. However, because you have to use it in its pure form, it can damage your skin.

NO BACTERICIDE OR ANTIBIOTIC WILL WORK because the virus is not a living organism like bacteria; antibodies cannot kill what is not alive.

The virus molecules remain very stable at colder temperatures, including air conditioning in houses and cars. They also need moisture and darkness to stay stable. Therefore, dehumidified, dry, warm and bright environments will degrade the virus faster.

UV LIGHT on any object that may contain the virus breaks down the protein. Be careful, it also breaks down collagen (which is protein) in the skin.

The virus CANNOT go through healthy skin.

Vinegar is NOT useful because it does not break down the protective layer of fat.

NO SPIRITS, NOR VODKA, serve. The strongest vodka is only 40% alcohol, and you need a minimum of 65%.

LISTERINE is 65% alcohol.

The more confined the space, the higher the concentration of the virus there can be. The more open or naturally ventilated, the space, less concentration of the virus there can be.

You have to wash your hands before and after touching any commonly used surfaces such as : mucosa (mouth area) , food, locks, knobs, switches, remotes, cell phones, watches, computers, desks etc. and don't forget when you use the bathroom.

You have to MOISTURIZE YOUR HANDS due to frequent washing. Dry hands have cracks and the molecules can hide in the micro cracks. The thicker the moisturizer, the better. Also keep your NAILS SHORT so that the virus does not hide there.

10% OF WORLD'S ELECTRICITY CONSUMPTION USED BY THE INTERNET

Google says it spends about 0.0003 kWh of energy on an average search query, translating to roughly 0.2g of carbon dioxide.

Related fact: searching the web 100 times is equivalent to drinking 1.5 tablespoons of orange juice, Google says.

That's hard work!

Around 10% of the world's total electricity consumption is being used by the internet, according to a recent research report from Swedish KTH.

The numbers have grown from 8% in 2012, illustrating the increasing effects of the internet's rapid growth.

The report goes into great detail examining energy-use in computers, tablets, smartphones, in production of said products, in networks, servers, data-centres and internet services as a whole, also noticing a shift in electricity consumption trends.

"There is a strong trend to push electricity consumption onto the network and data center infrastructure where energy costs are less transparent to consumers. Some challenges are identified for networking and data-center sectors. Of these the global roll-out of LTE (Long Term Evolution for mobile broadband) will be a crucial determinant of future electricity demand."

Best-case scenario sees a growth from 1 982 TWh (terawatt hours) per year, expected scenarios sees it go up to 2 547 TWh per year and worst-case scenario sees numbers go up by 3 422 TWh a year.

This equates to an expected 10% increase, with a worst case scenario of 13,5%. Whether or not the electricity consumption goes up by the former or latter estimation, this is still more than the world's total energy production from renewable sources such as wind and solar, which provide only an expected increase of 2151 TWh per year.

However, this does not include hydro and nuclear -powers, which provide an increase of 4060 to 2636 TWh respectively.

Expected growth to electricity use thereby equates to the world's entire hydropower supply, per year. No small increase in energy consumption just because of the internet.

~Internet

NEVARC Nets



40M Net

Monday, Wednesday and Fridays
10am Local time (East coast)

7.095 MHz LSB

Approximately + or – QRM

7.097 MHz has been used for a while now
Hosted by Ron VK3AHR

“Australia Ham Radio 40 Meter Net”

80M Net

Wednesday 20:30 Local time

3.622 MHz LSB

Hosted by Ron VK3AHR
Using the club call VK3ANE

2M Nets

Monday at 2000 local time on
VK3RWO repeater
146.975 MHz

